

REMARKS

By the above actions, the specification and claim 5 has been amended, and claims 6-9 added. Additionally, submitted herewith are replacement sheets for Figs. 8 and 9 in which a PRIOR ART legend has been applied to correctly correspond with the written description on pages 1 and 2. In view of these actions and the following remarks, reconsideration of this application is requested.

The specification has been amended to correct minor translational errors. No new matter has added as a result.

Applicants gratefully acknowledge the Examiner's indication of allowable subject matter with respect to claim 5. Accordingly, claim 5 has been rewritten in independent form to place it in immediate condition for allowance. New claim 6 is similar to Original claim 5 in that it includes the subject matter of Original claim 1 and the cam plate feature similar to that of claim 5. Dependent claims 7-9 correspond to Original dependent claims 2-4. It is submitted that the prior art does not disclose or suggest the invention as defined by claims 6-9 so that claims 6-9 should be found to be allowable in the same manner as was the case for claim 5.

Claims 1-4 were rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent 5,099,585 to Liskow. In the Office Action, the Examiner asserts that Liskow shows a measuring head with a head body 15, a base lever 63, and a measurement lever 23 mounted at a base end via a clamping mechanism, citing the linkage system described in column 4, lines 9-15 in support of this position. The Examiner has also stated that the bearing member has a slit portion that allows the shaft portion 25 to be fitted therein and a fastening member (unidentified) that rotates to release the shaft portion and to deform the bearing member to fasten the measurement lever.

However, a close analysis of Liskow shows that the gage 11 does not poses the features of claim 1. Liskow's gage 11 has a fixed feeler 17 mounted to gage head body 15 through an adjustable coupling 19 and an active feeler 23 coupled to a mounting post 25 extending through a passage 27 in the gage head body 15. Mounting post 25 is one lever arm of a bellcrank 29 that is mounted in the gage head 15 by a pair of cantilever beams 31, 33. The bellcrank 29 and active feeler arm 23 rotate generally about point E as the surface of a

workpiece is machined. An o-ring seal 77 surrounds the mounting post 25 about the pivot joint E, and a boot seal 81 mounted to the gage body surrounds the other end of mounting post 25 adjacent to active feeler 23. The linkage system provides motion in two dimensions, with the range of motion being shown in Fig. 3. For example, when the active feeler 23 moves toward the fixed feeler 17, the pivot bar 57 rotates around pivot point A, and pivot bar 59 rotates about pivot point C. The active feeler 23 can be moved away from the fixed feeler 17 to the expanded position shown as 23b. The maximum extent of rotation in this direction is reached when the stop arm 111 of the bellcrank 29 contacts the gage body at 113.

Liskow's linkage system does not act as a clamp mechanism, especially a clamp mechanism that securely and releasably mounts a measurement lever to a shaft portion of the tip end of the base lever. As Liskow is interpreted in the Office Action, the boot seal 81 is the only member that is present at the point that the measurement lever is mounted to a shaft portion provided at the tip end portion of the base lever. Thus, there is no bearing member as claimed. Moreover, Liskow has no fastening member that is mounted to the measurement lever that rotates in an open direction to release the shaft portion and rotates in a close direction to deform the bearing member to fasten the measurement lever to the shaft portion. Additionally, there is no fastening member that uses a rotating force to deflect the measurement lever by a predetermined amount.

In contrast, claim 1 is directed to a measuring head, comprising a head body, a base lever which is mounted to the head body swingably in a measurement direction and retract direction, and a measurement lever securely and releasably mounted at a base end thereof via a clamp mechanism to a shaft portion provided on a tip end portion of the base lever. The measurement lever includes a contact abutting a measured object in a tip end thereof. The clamp mechanism comprises a bearing member which is provided at a base end of the measurement lever. The bearing member has a slit portion formed therein to allow the shaft portion to be fitted therein, resiliently deforming the slit portion in a closing direction thereof allowing the bearing member to be fastened to the shaft portion. A fastening member is rotatably mounted to the measurement lever to swing in open and close directions. Rotating the fastening member in the open direction releases the shaft portion secured by the bearing member, and rotating the fastening member in the close direction resiliently deforms the

bearing member in a closing direction of the slit portion in the bearing member to fasten the measurement lever to the shaft portion via the bearing member. The fastening member at this time uses a rotating force generated in the fastening member to deflect the measurement lever by a predetermined amount.

As described in the specification on page 7, in this measuring head, rotating the fastening member, for example, cam plate 40, to fasten the bearing member 36 to the swinging support shaft 28 allows a restoring force (or a force caused by reaction) of the bearing member 36 to transfer from the bearing member 36 through the arm 38, cam plate 40 and shaft 48 to the measurement lever 32. The restoring force works from the arm 38 to the cam plate 40 in a direction indicated by an arrow H in Fig. 1, so that the measurement lever 32 deflects from the zero point position to a minus side, or in a direction of the amount of front travel.

Liskow's mounting post 25 is merely coupled to active feeler 23 and has a boot seal 81 to seal the opening through which post 25 extends through the case 15. There is no clamping mechanism as claimed, especially no bearing member having a resiliently deformed slit portion into which the shaft portion is fastened. There is no fastening member mounted to the measurement lever that rotates to fasten and release the bearing member. Further, there is no fastening member that uses a rotating force to deflect the measurement lever by a predetermined amount. For at least these reasons, Liskow cannot anticipate claim 1 as the indicated features of claim 1 are not present in Liskow's gage. Thus, the rejection of claims 1-4 should be withdrawn and such action is hereby requested.

As noted above, new claims 6-9 recite that the fastening member is a cam plate. As explained above, Liskow does not disclose a rotatable fastening member. Liskow also does not disclose a cam plate used as a fastening member. Thus, the Liskow reference cannot render claims 6-9 unpatentable.

The references that have been cited but not applied by the Examiner have been taken into consideration. However, since these references were not found to be relevant enough by the Examiner to apply against the original claims, no detailed comments thereon are believed to be warranted at this time.

While this application should now be in condition for allowance, in the event that any issues should remain after consideration of this response which could be addressed through discussions with the undersigned, then the Examiner is requested to contact the undersigned by telephone for that purpose.

Respectfully submitted,

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